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EXAMINER
KUMAR, VINOD

ART UNIT	PAPER NUMBER
1638	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/20/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/553,124	ENDO ET AL.	
	Examiner	Art Unit	
	Vinod Kumar	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/20/07*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

4a) Of the above claim(s) *12-18, 28-41, 43* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,19-27 and 42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/13/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restriction

1. Applicant's election with traverse of Group I, claims 1-11, 19-27, and 42 in the paper filed on February 20, 2007 is acknowledged. Claims 1-43 are pending. Claims 1-11, 19-27, and 42 are examined in this Office action.

Applicants argue that Office has not made a proper case under the PCT rules to support the lack of unity because the claims of Groups II and III depend directly from the claims of Group I (response, page 2, lines 4-8).

Applicant's arguments were fully considered but were not found to be persuasive. Applicants are reminded that the technical feature linking Groups I-III is a DNA sequence encoding an UDP-glucose-4-epimerase, and this technical feature does not constitute a special technical feature as defined by PCT Rule 13.2, as it does not define a contribution over the prior art teachings of Town et al., for the reasons of record stated in the Office action mailed on January 17, 2007. Applicants are also reminded not to confuse PCT restriction practice with US restriction practice. Applicant's argument regarding MPEP §803 is not applicable in the instant case (response, page 2, lines 9-11).

Due to these reasons, 12-18, 28-41, and 43 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. Non-elected subject matter must be removed from the elected claims. Claims 1-11, 19-27, and 42 are examined on merits in the instant Office action. This restriction is made FINAL.

Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

2. An initialed and dated copy of Applicant's IDS form 1449 filed on 01/13/06 is attached to the instant Office action.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copies of Application Nos. Japan 2003-113194, filed 04/17/2003, and Japan 2004-075932, filed on 03/17/2004 have been received.

Specification

4. The disclosure is objected to because of the following informalities:

Description of drawings do not have SEQ ID listed with the sequences. For example, the sequences in Figure 4 must be referred to by their sequence identifiers as required by 37 CFR 1.821. If the sequences appearing in the specification do not have sequence ID numbers assigned to them, then an amendment to the sequence listing will be required as well. There must not be any new matter submitted, therefore it is important to be careful to include only the sequences that are already disclosed in the

current specification. Failure to correct the deficiency will be held a non-responsive to this Office action.

Drawings

The drawings are objected to because of the following informalities:

Drawings are objected to because they fail to comply with 37CFR 1.83.

5. In Figures 6-8 "arrows" in the figures must be identified.

6. In Figures 7-8, 10-11, 13, 16, different parts of drawings must be identified and further described in description to drawings.

7. Figure 17 fails to comply with 37 CFR 1.84(g) because the figure is framed. Also molecular size marker must be indicated in the figure.

8. In Figure 18, molecular size markers are missing.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet"

or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Appropriate corrections are required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-2, 11, and 27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1 and 2 read on a naturally occurring gene per se, which is found in nature and thus, is unpatentable to applicants. The gene, as claimed in claim 1 or claim 2, has the same characteristics as those found naturally in the genome or as cellular precursors thereof and therefore does not constitute patentable subject matter.

Likewise, claims 11, and 27 read on a method that is naturally practiced in the nature by introducing a naturally occurring gene through hybridization between a plant lacking said gene and the plant naturally comprising said gene. The instantly claimed methods of claims 11 and 27 have the same characteristics as those found naturally and therefore does not constitute patentable subject matter. See *American Wood v. Fiber Disintegrating Co.*, 90 U.S. 566 (1974), *American Fruit Growers v. Brodgex Co.*, 283 U.S. 2 (1931), *Funk Brothers Seed Co. v. Kalo Inoculant Co.*, 33 U.S. 127 (1948),

Diamond v. Chakrabarty, 206 USPQ 193 (1980). It is suggested that claims 1 and 2 be amended by replace "A gene" in line 1 of claims 1 and 2 with --an isolated gene-- to identify a product that is not found in nature.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-11, 19-27, and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in its recitation "stringent conditions" which is confusing since it is unclear what level of stringency is encompassed by "stringency conditions". Page 13, lines 19-28 of specification gave examples but did not define "stringent conditions".

Claims 1-5, 11, 19-21, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in their recitation "gene" which is confusing since the limitation "gene" implies that the structure comprises the coding sequence and the associated promoter, terminator and enhancer encoding regions are also a part of the structure (see The Federal Register, Vol. 66, No. 4, Friday, January 5, 2001 at page 1108, left column, Endnote 13). In the instant case, Applicants do not appear to

describe such gene associated nucleic acid sequences. It is suggested that "gene" be amended to "coding sequence". All subsequent recitations of "gene" are also rejected.

Claims 11, 27, and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite because claims 11, 27 and 42 are incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. Claims 11, 27, and 42 are missing the essential step of expressing a product that results in salt tolerance in the plant. The last step only results in a plant comprising the gene.

Appropriate action/corrections are required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-11, 19-27, and 42 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a nucleotide sequence encoding the protein of SEQ ID NO: 2, a salt tolerant transgenic plant and a method of producing plant comprising said nucleotide sequence, does not reasonably provide enablement for (a) a gene encoding a protein which is derived from the amino acid sequence of SEQ ID NO: 2 by deletion, substitution, or addition of one or more amino acid residues and having activity of imparting stress or having UDP-glucose 4-epimerase activity, (b) DNA consisting of a nucleotide sequence hybridizing to SEQ ID NO: 1 under stringent

conditions and encoding a protein having activity of imparting salt stress or having UDP-glucose 4-epimerase activity. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The claimed invention is not supported by an enabling disclosure taking into account the *Wands* factors. *In re Wands*, 858/F.2d 731, 8 USPQ2d 1400 (Fed. Cir. 1988). *In re Wands* lists a number of factors for determining whether or not undue experimentation would be required by one skilled in the art to make and/or use the invention. These factors are: the quantity of experimentation necessary, the amount of direction or guidance presented, the presence or absence of working examples of the invention, the nature of the invention, the state of the prior art, the relative skill of those in the art, the predictability or unpredictability of the art, and the breadth of the claim.

Claims are broadly drawn to a gene encoding a protein having activity of imparting salt tolerance in plants or having UDP-glucose 4-epimerase activity, a salt tolerant transgenic plant and a method of making said plant.

The specification teaches isolation of a cDNA sequence encoding the protein of SEQ ID NO: 2 by screening a cDNA library prepared from the leaves of *Paspalum*. SEQ ID NO: 2 having UDP-glucose 4-epimerase activity is also taught. Salt tolerant transgenic rice and *Arabidopsis* plants comprising a cDNA sequence encoding the protein of SEQ ID NO: 2 are also taught. See pages 9-48; Examples 1-11.

Claim 1 is directed to a gene encoding a protein consisting of an amino acid sequence derived from the amino acid sequence of SEQ ID NO: 2 by deletion,

substitution, addition of one or several amino acid residues. The specification provides guidance on using a nucleotide sequence encoding SEQ ID NO: 2 in a method of producing transgenic plants with increased stress tolerance. However, specification does not provide guidance on using a modified (deletion/substitution, addition of one or more amino acid residues) version(s) of SEQ ID NO: 2 in a method of producing stress tolerant transgenic plants or transgenic plants exhibiting increased UDP-glucose 4-epimerase activity.

Keskin et al. (Protein Science, 13:1043-1055, 2004) teach that proteins with similar structure may have different functions. Besides, Thornton et al. (Nature structural Biology, structural genomics supplement, November 2000) teach that structural data may carry information about the biochemical function of the protein. Its biological role in the cell or organism is much more complex and actual experimentation is needed to elucidate actual biological function under *in vivo* conditions. Furthermore, Guo et al. (PNAS, 101: 9205-9210, 2004) teach that there is a probability factor of 34% that a random amino acid replacement in a given protein will lead to its functional inactivation. In the instant case, such a probability factor will be much higher one or more amino acid changes would encompasses significant changes in the protein, except changes due to codon degeneracy. Neither the state of art nor Applicants provide guidance as to how inoperable embodiments can be readily eliminated other than random trial and error. The additions, deletions or substitutions in one or more amino acid residues would also encompass changes in the functionally important domain(s) of the encoded protein. In the absence of guidance, it would have been

highly unpredictable at the time the claimed invention was made that a gene encoding a protein consisting of the amino acid sequence derived from the amino acid sequence of SEQ ID NO: 2 by deletion, substitution, or addition of one or several amino acid residues would encode a functionally active protein with UDP-glucose 4-epimerase activity, and which could have been used in a method of producing a stress tolerant transgenic plant. In the absence of adequate guidance, undue experimentation would have been required by a skilled artisan at the time claimed invention was made to determine how to use a gene encoding a protein consisting of the amino acid sequence which is derived from the amino acid sequence of SEQ ID NO: 2 by deletion, substitution, or addition of one or several amino acid residues, in a method of producing stress tolerant transgenic plant. See Genentech, Inc. v. Novo Nordisk, A/S, USPQ2d 1001, 1005 (Fed. Cir. 1997), which teaches that "the specification, not the knowledge of one skilled in the art" must supply the enabling aspects of the invention.

Furthermore, claim 2 is directed to any DNA consisting of a nucleotide sequence that would hybridize SEQ ID NO: 1 because the stringent conditions recited in the claim would encompass hybridization of a DNA that is unrelated to SEQ ID NO: 1. This implies that sequences, which either do not encode a protein, or encode a protein not having UDP-glucose 4-epimerase activity would also hybridize to SEQ ID NO: 1 under said conditions of hybridization. In the absence of adequate guidance, undue experimentation would have been required by one skilled in the art to determine how to use said unrelated sequences in a method, such as producing a transgenic plant with increased stress tolerance.

Claims 11, 27 and 42 are directed to a method of imparting salt tolerance to plants by introducing a nucleotide sequence encoding the protein of SEQ ID NO: 2. The specification provides guidance on using a nucleotide sequence encoding SEQ ID NO: 2 in a method of producing transgenic plants with increased stress tolerance. But specification does not provide guidance on stress-tolerant plant comprising introducing a nucleotide sequence encoding the protein of SEQ ID NO: 2 in any manner other than transforming a plant with SEQ ID NO: 1. The specification does not provide guidance on co-factors, or positive regulators of a nucleotide sequence encoding SEQ ID NO: 2 for example that makes the gene encoding SEQ ID NO: 2 to overexpress to produce a stress tolerant transgenic plant. The specification provides no guidance on up-stream regulatory factors, for example, that may be necessary in stimulating the overexpression of a nucleotide sequence encoding the protein of SEQ ID NO: 2. In the absence of guidance, undue experimentation would have been required by a skilled artisan at the time the claimed invention was made to determine how a stress tolerant transgenic plant could have been produced without transforming the plant with a nucleotide sequence encoding SEQ ID NO: 2.

Given the breadth of the claims, unpredictability of the art and lack of guidance of the specification, as discussed above, undue experimentation would be required by one skilled in the art to make and use the claimed invention. Therefore, it is maintained that the claimed invention is not enabled as commensurate in scope with the claims.

11. Claims 1-11, 19-27, and 42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject

matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims are broadly drawn to a gene encoding a protein having activity of imparting salt tolerance in plants or having UDP-glucose 4-epimerase activity, a salt tolerant transgenic plant and a method of making said plant.

The specification discloses isolation of a cDNA sequence encoding the protein of SEQ ID NO: 2 by screening a cDNA library prepared from the leaves of *Paspalum*. SEQ ID NO: 2 having UDP-glucose 4-epimerase activity is also disclosed. Salt tolerant transgenic rice and *Arabidopsis* plants comprising a nucleotide sequence encoding SEQ ID NO: 2 are also disclosed. See pages 9-48; Examples 1-11.

Claim 1 is directed to a gene encoding a protein consisting of an amino acid sequence derived from the amino acid sequence of SEQ ID NO: 2 by deletion, substitution, addition of one or several amino acid residues. Furthermore, claim 2 is directed to any DNA consisting of a nucleotide sequence that would hybridize SEQ ID NO: 1 because the stringent conditions recited in the claim would encompass hybridization of a DNA that is unrelated to SEQ ID NO: 1. This implies that sequences, which either do not encode a protein, or encode a protein not having UDP-glucose 4-epimerase activity would also hybridize to SEQ ID NO: 1 under said conditions of hybridization.

The Federal Circuit has recently clarified the application of the written description

requirement. The court stated that a written description of an invention "requires a precise definition, such as by structure, formula, [or] chemical name, of the claimed subject matter sufficient to distinguish it from other materials." University of California v. Eli Lilly and Co., 119 F.3d 1559, 1568; 43 USPQ2d 1398, 1406 (Fed. Cir. 1997). The court also concluded that "naming a type of material generally known to exist, in the absence of knowledge as to what that material consists of, is not a description of that material." Id. Further, the court held that to adequately describe a claimed genus, Patent Owner must describe a representative number of the species of the claimed genus, and that one of skill in the art should be able to "visualize or recognize the identity of the members of the genus." Id.

Finally, the court held:

> A description of a genus of cDNAs may be achieved by means of a recitation of a representative number of cDNAs, defined by nucleotide sequence, falling within the scope of the genus or a recitation of structural features common to members of the genus, which features constitute a substantial portion of the genus. Id.

See also MPEP Section 2163, page 174 of Chapter 2100 of the August 2005 version, column 1, bottom paragraph, where it is taught that

> [T]he claimed invention as a whole may not be adequately described where an invention is described solely in terms of a method of its making coupled with its function and there is no described or art-recognized correlation or relationship between the structure of the invention and its function. A biomolecule sequence described only by a functional characteristic, without any known or disclosed correlation between that function and the structure of the sequence, normally is not a sufficient identifying characteristic for written description purposes, even when accompanied by a method of obtaining the claimed sequence.

See also Amgen Inc. v. Chugai Pharmaceutical Co. Ltd., 18 USPQ 2d 1016 at 1021, (Fed. Cir. 1991) where it is taught that a gene is not reduced to practice until the inventor can define it by "its physical or chemical properties" (e.g. a DNA sequence).

The specification does not have adequate written description for (a) genus of genes encoding protein(s) consisting of an amino acid sequence derived from the amino acid sequence of SEQ ID NO: 2 by deletion, substitution, or addition of one or several amino acid residues and having activity of imparting salt stress tolerance to plants or having UDP-glucose-4-epimerase activity, and (b) genus of nucleotide sequences that hybridize to SEQ ID NO: 1 under current written description guidelines. Specification does not describe these undisclosed structures of Applicant's broadly claimed genus and one skilled in the art cannot reliably predict the structure of these sequences based upon the disclosure of SEQ ID NOs: 1 and 2.

Furthermore, said structures of Applicant's broadly claimed genus are not correlated to the function of increased salt tolerance in a transgenic plant. Further, Applicants have failed to describe conserved functional domains that are shared by these undisclosed structures of their broadly claimed genus. Applicants have failed to reduce their broadly claimed genus to practice.

Accordingly, there is lack of adequate description to inform a skilled artisan that applicant was in possession of the claimed invention at the time of filing. See Written Description guidelines published in Federal Register/Vol.66, No. 4/Friday, January 5, 2001/Notices; p. 1099-1111.

Given the claim breadth and lack of guidance as discussed above, the specification does not provide written description of the genus broadly claimed. Accordingly, one skilled in the art would not have recognized Applicants to have been in possession of the claimed invention at the time of filing.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1-3 are rejected under 35 U.S.C. 102(b) as anticipated by Town et al. (NCBI, GenBank, Sequence accession No. NM_101148, Published 20 Aug. 2002).

Town et al. disclose a gene consisting of a DNA which consists of a nucleotide sequence encoding a UDP-glucose 4-epimerase protein. The reference also discloses a recombinant vector (BAC clone) comprising said nucleotide sequence. See pages 1-2. The properties of imparting salt tolerance to plants, and exhibiting UDP-glucose 4-epimerase activity is inherent to the protein disclosed in the reference. The property of

hybridizing to a DNA under stringent conditions is also inherent to the nucleotide sequence disclosed in the reference.

This rejection is made because parts (b) and (c) of claim 1 and parts (e) and (f) of claim 2 read on any nucleotide sequence encoding a UDP-glucose 4-epimerase.

Accordingly, Town et al. anticipated the claimed invention

13. Claims 1-5, 9, 10, 11, 19-21, 25, 26-27, and 42 are rejected under 35 U.S.C. 102(b) as anticipated by Dormann et al. (The Plant Journal, 13:641-652, 1998).

Dormann et al. disclose a transgenic plant and a method of making said transgenic plant comprising transforming said plant with a recombinant vector which comprises a nucleotide sequence encoding a UDP-glucose 4-epimerase, and wherein said transgenic plant is a dicotyledonous *Arabidopsis* plant, and wherein said transgenic plant belongs to family *Brassicaeae*. Furthermore, the transgenic plants exhibited increased UDP-glucose 4-epimerase activity. See in particular, page 641, abstract; page 643, figure 2, tables 1 and 2; page 650, experimental procedures.

The property of imparting salt stress tolerance in a plant is inherent to the method of making said plant comprising introducing and expressing said nucleotide sequence encoding the UDP-glucose 4-epimerase protein disclosed in the reference.

The property of hybridizing to a DNA under stringent conditions is also inherent to the nucleotide sequence encoding the UDP-glucose 4-epimerase protein disclosed in the reference.

This rejection is made because parts (b) and (c) of claim 1 and parts (e) and (f) of claim 2 read on any nucleotide sequence encoding a UDP-glucose 4-epimerase.

14. Claims 1-11, 19-27, and 42 are rejected under 35 U.S.C. 102(e) as anticipated by Rosa et al. (US Patent Publication No. US2004/0214272 A1, Published October 28, 2004, Filed April 28, 2003). Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Rosa et al. disclose a nucleotide sequence encoding the polypeptide of SEQ ID NO: 281136 which comprising a protein having 90% sequence identity to instant SEQ ID NO: 2, a recombinant vector, a transgenic plant and a method of making said transgenic comprising said nucleotide sequence, or wherein said transgenic plant is a monocotyledonous maize plant belonging to family *Gramineae*, or wherein said transgenic plant is a dicotyledonous canola belonging to family *Brassicaceae*. The reference further discloses that the nucleotide sequence disclosed in the reference is capable of hybridizing to a DNA consisting of a nucleotide sequence under stringent conditions of hybridization. See in particular, paragraphs 0006-0018, 0021, 0025-0026, 0043-0047, 00660082; claims 1-3.

The properties of imparting salt tolerance to plants, and exhibiting UDP-glucose 4-epimerase activity is inherent to a nucleotide sequence encoding the protein disclosed in the reference.

Conclusions

15. Claims 1-11, 19-27, and 42 are rejected.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinod Kumar whose telephone number is (571) 272-4445. The examiner can normally be reached on 8.30 a.m. to 5.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAVID H. KRUSE, PH.D.
PRIMARY EXAMINER